

EXHIBIT B

UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF WASHINGTON

CITY OF SPOKANE, a municipal)
corporation, located in the)
County of Spokane, State of)
Washington,)
Plaintiff,)
vs.) Case No.
MONSANTO COMPANY, SOLUTIA INC.,) 15-cv-00201-SMJ
and PHARMACIA CORPORATION, and)
DOES 1 through 100,)
Defendants.)

VIDEO DEPOSITION OF DANIEL SCHLENK, PhD
NOVEMBER 13, 2019
SAN DIEGO, CALIFORNIA

Reported by:

Cynthia J. Vega, RMR, RDR, CSR 6640, CCRR 95

Job No. 171796

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November 13, 2019

9:06 a.m.

The video deposition of Daniel Schlenk, PhD, a
Witness herein, taken on behalf of Defendants, held at
11440 West Bernardo Court, Suite 265, in the City of
San Diego, County of San Diego, State of California,
before Cynthia J. Vega, Certified Shorthand Reporter
6640, Registered Merit Reporter, Registered Diplomate
Reporter, California Certified Realtime Reporter 95.

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MICHAEL DUARTE

* * * * *

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1 SAN DIEGO, CALIFORNIA

2 WEDNESDAY, NOVEMBER 13, 2019, 9:06 A.M.

3

4 THE VIDEOGRAPHER: This is the start of media
5 label number 1 of the video-recorded deposition of
6 Dr. Daniel Schlenk, PhD, in the matter of the City of
7 Spokane, et al., versus Monsanto Company, et al., in the
8 United States District Court, Eastern District of
9 Washington. Number 15-cv-00201-SMJ.

10 This deposition is being held at Baron & Budd,
11 11440 West Bernardo Court, San Diego, California 92127,
12 on November 13, 2019, at approximately 9:06 a.m.

13 My name is Michael Duarte. I am the legal
14 video specialist from TSG Reporting, Inc., headquartered
15 at 747 Third Avenue, New York, New York.

16 The court reporter is Cindy Vega in association
17 with TSG Reporting.

18 Will the court reporter please swear in the
19 witness.

20

21 DANIEL SCHLENK, PhD,
22 Witness herein, being first duly sworn, testifies as
23 follows:

24

25 MR. HANSEN: We'll waive video introductions

1 A. The health of the Spokane River, we did the
2 assessment to determine the risks of PCBs to organisms
3 in the Spokane River.

4 Q. So you were focused solely on PCBs; correct?

5 A. In this particular assessment, yes.

6 Q. And you did not consider any other constituents
7 that might be in the sediment, tissue, or water of fish
8 or wildlife?

9 A. I did not conduct a risk assessment on any
10 other constituent.

11 Q. So you didn't analyze, for example,
12 concentrations of metal in sediment, tissue, or water;
13 correct?

14 A. In the Spokane River, not that I can recall.

15 MR. HANSEN: Okay. I'll mark this as
16 Exhibit 4.

17 (Exhibit 4 was marked for identification.)

18 BY MR. HANSEN:

19 Q. Dr. Schlenk, showing you what's been marked as
20 Exhibit 4. Is this the Ecology 2001 study that we were
21 discussing and is referenced in your report?

22 A. Yes, I believe it is.

23 Q. And just for -- the full title is "An
24 Ecological Hazard Assessment for PCBs in the Spokane
25 River"; correct?

1 A. Yes.

2 Q. And it's by Johnson, if you look on the second
3 page?

4 A. Yes.

5 Q. And if you turn to page 30, and look at the
6 bottom of the page under the subheading "Other Chemical
7 Contaminants."

8 A. Yes.

9 Q. The first paragraph reads, "Metals
10 contamination of the Spokane River with zinc, cadmium,
11 and lead from upstream sources in Idaho is well known.
12 A number of the previously referenced reports contain
13 data on metals concentrations in fish and sediment.
14 Water data can be found in Pelletier (1994) and Hopkins
15 and Johnson (1997). A TMDL for zinc, cadmium, and lead
16 was proposed by Pelletier and Merrill (1998) and
17 approved by EPA." Did I read that correctly?

18 A. Yes, you read that correctly.

19 Q. Okay. So the report -- this is the report that
20 you are updating? Is that a fair assessment of --
21 characterization of your report, you want to update this
22 Johnson 2001 from Ecology?

23 A. The idea was to use the Johnson 2001 report and
24 then evaluate -- do the same analysis that they had done
25 at a later date.

1 Q. And Johnson here acknowledges the well-known
2 contamination of metals in fish tissue in the Spokane
3 River?

4 A. The way I read that is that they acknowledge
5 that there are other compounds that are present in the
6 Spokane River.

7 Q. And in fish tissue?

8 A. Yes. It says in fish.

9 MR. HANSEN: This is Exhibit 5.

10 (Exhibit 5 was marked for identification.)

11 BY MR. HANSEN:

12 Q. I've shown you what's been marked as Exhibit 5.
13 And I believe because it's an online printout, the
14 actual report starts on page -- the second page. It's
15 described as "Ecological Risk Analysis of Elevated Metal
16 Concentrations in the Spokane River, Washington."
17 It's -- did I read that right?

18 A. Yes, you read that right.

19 Q. And this is a 2000 report and it's by Kadlec;
20 correct?

21 A. Yes.

22 Q. And so this metals concentrations analysis
23 predates the Johnson report that we were referring to as
24 Exhibit 4?

25 A. The date that's on this page is before the

1 2001.

2 Q. You'd agree with me that in certain
3 concentrations, metals, like cadmium, lead, and zinc,
4 may be toxic to fish species and harmful to ecological
5 resources?

6 MR. LAND: Objection. Vague.

7 THE WITNESS: All things are toxic. Metals in
8 excess of thresholds would be considered toxic to
9 organisms for those thresholds in those organisms.

10 BY MR. HANSEN:

11 Q. That includes metals described in Kadlec?

12 A. If concentrations of metals exceed thresholds
13 for those metals in those organisms, then you would
14 estimate risks from that relationship.

15 Q. I'd ask you to turn to Roman numeral V, which
16 is the abstract of this Kadlec report. So in the
17 abstract, they're describing the intent of the purpose
18 of the paper. About three sentences down, it starts
19 off, "The ecological effects of this and other enriched
20 elements are discussed. The aggregate effects of
21 multiple metals, other manmade contaminants, and
22 excessive water temperature are considered in overall
23 risk. There is substantial evidence of metal-induced
24 ecological degradation in the Spokane River
25 progressively increasing in severity upstream, nearer

1 species of birds that may potentially be infected by PCB
2 concentrations; is that correct?

3 A. Yes.

4 Q. And in this paragraph, you specifically state
5 herons, osprey, white pelicans, and bald eagles; is that
6 right?

7 A. Correct. I spelled herons wrong, though.

8 Q. I wasn't going to point that out.

9 So these are examples of species that you refer
10 to?

11 A. These are examples of birds that occur in
12 eastern Washington according to the Burke Museum.

13 Q. All right. I'll ask you about that in a
14 second. Am I correct that in this report you did not
15 use specific exposure parameters for these -- excuse me.
16 Let me strike that question and ask it in a better way.

17 Am I correct that in your report you did not
18 use exposure parameters specific to these individual
19 species of birds?

20 A. Exposure parameters. I'm not sure what you
21 mean by that.

22 Q. Sure. So essentially my question concerns --
23 let me ask it this way: You used a generic avian value
24 for the thresholds that you used in this report;
25 correct?

1 A. Correct.

2 Q. And those don't consider, for example,
3 species-specific dietary intakes; correct?

4 A. They use a -- as I understand it, they actually
5 use a dietary evaluation that attempts to encompass all
6 birds. That's how I understand the way that they create
7 those thresholds. But there is not a species-specific
8 evaluation in there that I know of in terms of how they
9 determine those thresholds.

10 Q. Okay. And I guess, is it -- then is it fair
11 for me to refer to that as a generic avian threshold?

12 A. I wouldn't use the term "generic." I would use
13 a "surrogate" is a more -- word that we use.

14 Q. Okay. So, for example, in these -- with
15 respect to these four avian species that you identify in
16 this particular paragraph, the value selected refer to
17 that surrogate avian value and not, for example, an
18 osprey-specific value?

19 A. Correct. I don't know of a osprey-specific
20 value.

21 Q. And if I -- am I correct that the dietary
22 intake for, for example, the eagle, the bald eagle, is
23 different than the dietary intake from the heron?

24 A. I do not know that.

25 Q. Okay. And if I could call your attention to

1 Q. And you mentioned that -- so you mentioned
2 earlier that you relied upon the Burke Museum for the
3 ranges of the species?

4 A. The website, the BurkeMuseum.org and also the
5 GEI 2004.

6 Q. That's in -- both of those sources are on
7 page 12 of your report, the last paragraph -- or the
8 last paragraph before toxicity equivalents, you list
9 BurkeMuseum.org and GEI 2004?

10 A. Right.

11 MR. HANSEN: Mark this as -- I believe this
12 is 6.

13 (Exhibit 6 was marked for identification.)

14 BY MR. HANSEN:

15 Q. So I'm showing you -- and feel free to take a
16 flip through. There is not much there, but I'm showing
17 you what has been marked as Exhibit 6. I'll represent
18 to you that it's not a very good printout, but it's a
19 printout of BurkeMuseum.org. And I'll be honest, I
20 don't know where the data comes from that purports to
21 identify the species-specific ranges and diets that you
22 mentioned in your report. It's pretty much just a
23 typical front page of museum website. There appears to
24 be hours open, some children looking at -- pictures of
25 children experiencing the museum; is that correct?

1 A. Based on what you have provided, that is
2 correct.

3 Q. Okay. And so if I were to try to ascertain the
4 data that you used for eastern Washington species, would
5 I be able to find it in your report?

6 A. You would find it on this website. You would
7 have to either enter in that data to search for that or
8 look through some of the other links that are provided
9 on that website to find that information.

10 Q. Okay. And you mentioned in your testimony that
11 you used the Burke Museum to ascertain the habitats of
12 the species in eastern Washington. Did you go anymore
13 specific and go to the Spokane River basin or watershed?

14 A. The intent was to use the Spokane River
15 watershed as a source. I don't recall what I actually
16 entered into the search engine to find those species,
17 but -- but as far as I can remember, they were located
18 in the Spokane River watershed.

19 Q. So I'm correct in that I would have to do more
20 digging into the BurkeMuseum.org website and search
21 white pelicans and that would yield data that shows that
22 they are located in eastern Washington?

23 A. I'm not sure if you entered in white pelican
24 what that would find you.

25 Q. Okay.

1 A. And I honestly can't remember what I entered in
2 to find that. I would assume that I did a Spokane River
3 drainage or eastern Washington search within that
4 website.

5 Q. So -- sorry. I didn't mean to interrupt you.
6 Sorry.

7 So as we sit here today, you can't point me to
8 anything that shows white pelicans along the Spokane
9 River, you can just --

10 A. I can point you to the Burke Museum website
11 which I utilized to determine that white pelicans are in
12 that location.

13 MR. HANSEN: Exhibit 7.

14 (Exhibit 7 was marked for identification.)

15 BY MR. HANSEN:

16 Q. So Exhibit 7 before you is titled
17 "Intermountain Province Subbasin Plan Executive
18 Summary." And it's by GEI Consultants, Inc. Is this
19 your reference GEI 2004?

20 A. I believe it is.

21 Q. And this was the additional citation that you
22 mentioned for estimated ranges and dietary preferences
23 of the species that you identified; correct?

24 A. No. I used this as examples of animals that
25 would -- fish-eating animals that reside in the area of

1 the Spokane River drainage.

2 Q. What did I ask? Sorry. You don't have to
3 answer that.

4 I guess my question was: You used this -- I
5 was just using your language. You said these species
6 were determined using estimated ranges and dietary
7 preferences provided from the Burke Museum, but you also
8 list GEI 2004 in that paragraph; correct?

9 A. Correct.

10 Q. Okay. And then -- so this is the GEI 2004
11 document. But you didn't use the GEI 2004 document to
12 ascertain the estimated ranges or habitats of the
13 species that you list?

14 A. I listed it to determine that they occur in
15 that location --

16 Q. Okay.

17 A. -- as examples.

18 Q. Is occurrence sufficient for your purposes for
19 this ecological risk assessment?

20 A. Occurrence -- occurrence is appropriate when I
21 used them as examples of mammals that would be in those
22 locations.

23 Q. Okay. Can I ask you to turn to page 4-38 of
24 this particular exhibit, towards the back.

25 A. Uh-huh. Oh, there it is.

1 Q. So I see -- essentially on this page you see a
2 subheading saying "American White Pelican," and below
3 that "Population Status and Trend"; correct?

4 A. Yes.

5 Q. That's right under the table.

6 Middle of the first paragraph in this report
7 that you use, it says, "Presently, a single breeding
8 colony exists in the state at the McNary National
9 Wildlife Refuge, downstream of Pasco, Washington. As
10 many as 2,000 nonbreeding pelicans have come to the
11 Potholes region of the Columbia Basin. Wintering
12 concentrations of 40 to 300 individuals use the Columbia
13 River from the Walla Walla River confluence to Priest
14 Rapids." Did I read that correctly, omitting some of
15 the references?

16 A. You read that correctly.

17 Q. Okay. And is this your reference point for the
18 existence of white pelicans on the Spokane River?

19 A. I don't recall. It was either this reference
20 or the Burke Museum is where I got that information.

21 Q. And if you go down a little bit further, the
22 paragraph starting with "Doran et al."

23 "Doran et al. (1999) include the southern
24 portion of the Spokane and Upper Columbia subbasins
25 within the species range. However, the only documented

1 record in the Washington Priority Habitats and Species
2 database occurred in June 2000 when ten foraging
3 individuals were sighted on the Pend Oreille" --
4 O-r-e-i-l-l-e -- "River north of Newport in the Pend
5 Oreille subbasin. The Washington State GAP analysis
6 found no evidence of current breeding within the
7 province."

8 And I guess I'll just ask the same question.
9 Is this the reference that you're relying on for the
10 existence of white pelicans along the Spokane River?

11 A. It is very likely a reference that I used to
12 locate that, yes.

13 Q. Am I correct that at least in this portion of
14 the document under white pelicans on 4-38 and extending
15 on to 4-39, there is no specific reference to the
16 Spokane River?

17 A. Well, I would disagree with that because it
18 says, "include the southern portion of Spokane and Upper
19 Columbia subbasins," which would include the drainage to
20 the Spokane River.

21 It also says further on in that paragraph that
22 "WDFW notes that nonbreeding pelicans may be
23 underrepresented in the WDFW database." So I took that
24 to indicate that they -- you cannot rule out the
25 possibility that they are in the Spokane River system.

1 River along the Washington population status for the
2 white pelican from this Department of Fish and Wildlife
3 report.

4 A. Is that a question?

5 Q. It's leading to a question.

6 My question is: Why would you not have used --
7 if you wanted to do an assessment of the species that
8 were specific to the Spokane River, why would you not
9 have relied upon the Washington Department of Fish and
10 Wildlife or the Washington Department of Ecology
11 documents?

12 MR. LAND: Objection. Assumes facts.
13 Misleading as the first statement.

14 Otherwise, you can answer.

15 THE WITNESS: As I mentioned, the purpose of
16 the study was to evaluate -- to provide examples of
17 animals that would be feeding on fish contaminated with
18 PCBs. We were not conducting a population assessment of
19 any avian wildlife. We were not conducting a population
20 assessment of any other biota that was present in that
21 river system. So I would not have looked for this
22 particular document because my purpose was to provide
23 examples of animals that reside within those locations.

24 BY MR. HANSEN:

25 Q. But if you -- but you conclude that avian

1 correctly from as stated in this document?

2 A. I did not see where you read. Which one was
3 that?

4 Q. Okay. Sorry. Bullet point number 1 under
5 "Food and Feeding Behavior."

6 A. Yes. I see it now.

7 Q. Okay. And then a few bullet points down, maybe
8 five or so, you have a bullet point that says,
9 "Typically, a small proportion of the black bear's
10 annual diet is made up of animal matter, including
11 insects, mice, voles, ground squirrels, fawns and elk
12 calves, eggs, carrion (animal carcasses), and fish, but
13 their availability varies and is often unpredictable.
14 An occasional bear may take livestock." Did I read that
15 correctly?

16 A. Yes.

17 Q. So this is the data from the Department of Fish
18 and Wildlife discussing the black bear's dietary intake;
19 correct?

20 A. A description of annual diet and predicted
21 items. Yes.

22 Q. Okay. And so according to this document, a
23 small proportion of a black bear's annual diet is made
24 up of nonplant diet; correct?

25 A. According to this document, that's what those

1 words say, yes. It also says that they eat fish too,
2 so...

3 Q. In -- during the report that -- in your
4 assessment that you conducted, do you ascertain how much
5 fish a black bear eats as a percentage of its diet?

6 A. We did not do a species-specific feeding
7 analysis, no.

8 Q. Similar to the questions before, am I correct
9 that your report has no scientific data or analysis of
10 population trends of black bears in and around the
11 Spokane River?

12 A. We did not do a population assessment of black
13 bears.

14 Q. So you don't know one way or the other whether
15 black bears -- the populations of black bears near or
16 around the Spokane River are increasing or decreasing?

17 A. I do not know whether the population of black
18 bears are increasing or decreasing around the Spokane
19 River.

20 Q. Another fish-eating mammal you identify on
21 page 12 of your report is the raccoon. Am I correct
22 that your report doesn't identify anywhere how much of
23 the average raccoon diet is composed of fish?

24 A. I did not do a species-specific evaluation of
25 the feeding strategies for raccoons.

1 Q. If I can refer you to Johnson 2001, page 38. I
2 direct your attention to the last paragraph on this
3 page. Johnson 2001 -- excuse me. The last sentence of
4 this page. "The raccoon was not evaluated because its
5 diet is approximately 37 percent aquatic invertebrates,
6 for which there are little data, and 60 percent from
7 nonriver sources." And that's from TAMS 2000.

8 So am I correct that Ecology decided, at least
9 in this particular report, not to evaluate the diet of a
10 raccoon because 97 percent of it was from -- was
11 nonfish?

12 A. Actually, again they were using values from the
13 Hudson River to come up with those particular values, so
14 based upon their analysis of that data source, they
15 decided not to do -- it would appear they decided not to
16 evaluate raccoons as a receptor.

17 Q. But you list it as a potential receptor?

18 A. I list it as an example of mammals that consume
19 fish. I did not list it as a receptor.

20 Q. So your report has a -- you create a
21 distinction in your report between a mammal that can at
22 some point consume fish and a potential receptor for --

23 A. I did not consider any of these as receptors.
24 I considered them as examples. We used fish-eating
25 mammals as a receptor, but these particular species we

1 did not use as receptors. We used them as examples of
2 fish-eating mammals and birds.

3 Q. But at least according to the Johnson
4 evaluation, 97 percent of a raccoon's diet is nonfish
5 based?

6 A. In the Hudson River, it would appear that
7 97 percent of their diet is nonfish based.

8 Q. And the department of -- Washington Department
9 of Ecology took that analysis and opted not to do a
10 specific review of the raccoon's diet; correct?

11 A. It would appear that's what they decided, yes.

12 Q. Would you agree with me that mammals that eat
13 less fish in their diet have less opportunity for
14 exposure to PCBs contained in fish tissue?

15 MR. LAND: Objection. Incomplete hypothetical.

16 THE WITNESS: I think it depends on the
17 location, what their other food supply is, and that is
18 site specific as well as species specific.

19 BY MR. HANSEN:

20 Q. And you can't answer that for the Spokane River
21 because you didn't do a site-specific or
22 species-specific analysis; correct?

23 A. We did not do a site-specific or
24 species-specific analysis of fish-eating mammals or
25 fish-eating birds.

1 that mink -- strike that. Let me start over. That was
2 a bad question.

3 In the process of updating this Johnson report
4 with newer data or newer values, did you identify any
5 data that would indicate that this is an incorrect or
6 out-of-date statement by Ecology in 2001?

7 A. So, again, let me just clarify. We didn't
8 necessarily update the Johnson report. We wanted to
9 compare parts of the report, so we did not take the
10 report as its entirety. We took parts of the report and
11 evaluated those parts. We did not do population
12 assessment on any mammal or any bird as part of that
13 exercise.

14 Q. Okay. I only use the word "update" because you
15 used it in the report. I think you used it in your
16 testimony. So if you don't think that's accurate --

17 A. We did update a part of it, but not the entire
18 report. As I mentioned earlier, there were things in
19 the report that we did not target as an update sort of
20 exercise.

21 Q. And to the extent -- and again, because all of
22 these are examples that you identify from
23 BurkeMuseum.org, that data is present somewhere within
24 the BurkeMuseum.org website and not present within the
25 four corners of your report; correct?

1 the Great Lakes that showed that relationship.

2 Q. Okay. So the answer to my question would be
3 no, you don't have any data or scientific studies that
4 identify these observed effects?

5 A. We do have -- we do have threshold -- we have
6 exposure values that exceed thresholds that were
7 determined on species that also reside in the Spokane
8 River basin.

9 Q. But you don't have actual observed effects as
10 you identify in this for this particular --

11 A. We have --

12 MR. LAND: Wait for him to finish.

13 BY MR. HANSEN:

14 Q. So my question is essentially -- you list a
15 number of actual observed effects. And my question is
16 very simple. Do you have any scientific data that shows
17 actual observed effects from the Spokane River area?

18 A. Okay. I see what you're saying now. We did
19 not measure effects in mammals. And we did not know of
20 data that provide those effects in mammals or
21 fish-eating birds specifically collected from the
22 Spokane River drainage.

23 Q. Okay. So that data doesn't exist?

24 A. I can't --

25 Q. Strike that. It was my fault. I interrupted

1 you.

2 My question is: So that data either does not
3 exist or you were not aware of it?

4 A. I'm not aware of it.

5 MR. HANSEN: Okay. I think now is a good time
6 for another 15-minute break or 10.

7 MR. LAND: Sounds good.

8 THE VIDEOGRAPHER: Going off the record. The
9 time is 11:14 a.m.

10 (Recess, 11:14 a.m. to 11:29 a.m.)

11 THE VIDEOGRAPHER: We are back on the record.
12 The time is 11:29 a.m.

13 BY MR. HANSEN:

14 Q. Dr. Schlenk, I wanted to switch topics and talk
15 to you about your sediment assessments of which are
16 indicated on table 7 of your report, page 14.

17 A. Okay.

18 Q. And under the subheading "Sediment
19 Assessments," the first sentence is "A consensus
20 threshold derived from MacDonald, et al. (2000) was used
21 to assess risk from sediment concentrations of PCBs"; is
22 that correct?

23 A. Yes. You've read that correctly.

24 Q. And then the second sentence indicates that
25 these thresholds were normalized to TOC, which is total

1 A. If I wanted -- I guess probable and threshold
2 are two different words. I guess it depends on what
3 your ultimate goal was in determining whether things
4 were probable or not.

5 And again, these are definitions that MacDonald
6 uses. I think in any case that you're doing a risk
7 assessment in a system using a combined threshold, you
8 want to be as conservative as possible. So you -- in my
9 expertise, we always use the most conservative value
10 when we are assessing a value for the -- or a system for
11 effects that there is limited data on.

12 Q. Is there limited data in these circumstances
13 with respect to the Spokane River?

14 A. In my opinion, there is limited data especially
15 for the sediment evaluations.

16 Q. You'd agree that MacDonald's 676 value for PEC
17 that he identifies for PCBs is about ten times more than
18 the threshold that you use?

19 A. It is ten times higher, yes. Well, higher.
20 More than ten times higher.

21 Q. On page 29 of MacDonald, I think it probably
22 just articulates what the table articulates, but the
23 very last sentence on this page under the "Summary"
24 subheading.

25 A. Yes.

1 BY MR. HANSEN:

2 Q. If I can refer you back to page -- all the way
3 back to page 7 of your -- excuse me -- table 7 of your
4 report, the one we were discussing earlier about benthic
5 thresholds.

6 A. Yes. I'm there.

7 Q. Okay. And the citation that you use, the
8 second value that you had referred to as a threshold is
9 12 million nanograms per kilogram of normalized to total
10 organic carbon; is that correct?

11 A. Yes.

12 Q. Okay. And the citation for that is NYSDEC
13 1998?

14 A. Yes.

15 Q. Is that NYSDEC 1998 reference Exhibit 13 that's
16 before you now?

17 A. I believe it is.

18 Q. And the title of that document is "Technical
19 Guidance for Screening Contaminated Sediments," and it's
20 prepared by New York State Department of Environmental
21 Conservation; is that correct?

22 A. I believe so.

23 (Exhibit 14 was marked for identification.)

24 BY MR. HANSEN:

25 Q. And the document that I just handed or that was

1 just handed to you as Exhibit 14, that's titled
2 "Screening and Assessment of Contaminated Sediment," and
3 that's also New York State Department of Environmental
4 Conservation, June 24, 2014?

5 A. Okay.

6 Q. Did I read that correctly?

7 A. I believe so.

8 Q. And if you turn to page 1 which under the
9 "Purpose" subheading.

10 A. Okay.

11 Q. I'm actually looking at the very last paragraph
12 on this document. And I'll read it and say, "This
13 document supersedes previous editions of 'Technical
14 Guidance for Screening Contaminated Sediment,' the most
15 recent of which is dated January 1999."

16 Is it your understanding that this document
17 from New York State Department of Environmental
18 Conservation from 2014 supersedes the document that you
19 identify on table 7 of your report?

20 A. It would appear, yes.

21 Q. And I'd ask you to turn to pages 66 and 67 of
22 the current Exhibit Number 14.

23 A. Okay.

24 Q. And it's a table, Table 5, "Freshwater Sediment
25 Guidance Values"; is that correct?

1 concentrations that were above threshold.

2 Q. And does that mean for two of the three species
3 that you examined, their concentrations were below
4 threshold?

5 A. In some cases, yes.

6 Q. And given that you did not look at more
7 than 3 -- strike that.

8 The phrase "at least one" expresses to me as a
9 reader that there is some uncertainty in your analysis.
10 Do you review that opinion as being uncertain?

11 A. No. I consider it to be conservative because
12 it means that the species that we did look at, there was
13 at least one species that actually showed that and
14 potentially more that we didn't look at that may be
15 above threshold, but we didn't have the -- they didn't
16 fit the criteria for that particular study that we were
17 trying to do.

18 Q. And when you say "didn't fit the criteria" for
19 the type of study that you were trying to do, can you
20 explain what you mean by that?

21 A. Sure. Yes. So again, the idea here was to
22 evaluate a time period after 2001 to determine if there
23 were still exceedances of threshold values for sediment
24 and fish tissue. That was the premise to do that
25 particular study. Then in order to do that, what I did

1 is I evaluated the studies that were provided by the
2 State of Washington on a database. And I looked
3 specifically for species that were in multiple locations
4 on the Spokane River that allowed me to look at tissue
5 concentrations. And I tried to pick sites where we had
6 multiple species, and in this particular case there were
7 three that tended to be the most prevalent where we had
8 that data and the sites where those three species tended
9 to reside.

10 And so that was the criteria for -- and so
11 that's why we chose 2012 was because that criteria was
12 met. There were other fish species that had, you know,
13 PCB concentrations, but they weren't distributed in a
14 way that allowed us to make those site-to-site
15 comparisons and species-to-species comparisons that we
16 wanted to compare in 2001.

17 Q. And so what you just described to me in your
18 testimony, would you consider that to be selection
19 criteria for the sampling that you used for this
20 assessment?

21 A. We did a selection criteria, yes.

22 Q. And is that selection criteria within this
23 report?

24 A. It's not written in there. It's not. We --
25 yeah, it's not written in there.

1 Q. So you looked at their methodology; correct?

2 A. Correct.

3 Q. Is that what you're saying?

4 A. Yes.

5 Q. Just going back to that opinion on page 4.

6 You -- the second part says, it poses "a hazard to at
7 least one species of fish at Upper Lake Spokane and
8 above Monroe"; is that correct?

9 A. Yes.

10 Q. Okay. And then is this -- sorry.

11 This specific opinion, does this refer to those
12 sampling locations? Is your opinion of the hazard
13 specific to that one species of fish at those two
14 sampling locations?

15 A. Is -- can you state that one more time?

16 Q. Yeah, sure. No problem. I'll try to rephrase
17 it in what I'm trying to get at.

18 Essentially what I'm asking is: A river
19 essentially flows, right, and so there is a wide stretch
20 of the river, and then you've identified specifically in
21 this opinion two locations on the river?

22 A. We didn't identify those locations. Those were
23 locations that fish were sampled from by the State of
24 Washington.

25 Q. Okay. And that's getting to what I'm asking

1 is: Is your opinion specific to those sampling
2 locations?

3 A. My opinion is specific to the sites that we had
4 samples from.

5 Q. And so your opinion wouldn't necessarily be
6 representative of other reaches of the Spokane River?

7 A. It's representative of the locations where we
8 collected samples.

9 Q. Okay.

10 A. Or where samples were collected for us, I
11 should say. That's probably more accurate.

12 Q. So my question, I guess, would be: If you were
13 to take your opinion here that PCBs pose a hazard to at
14 least one species of fish at Upper Lake Spokane and
15 above Monroe, you wouldn't necessarily be able to
16 predict or assess the hazard at locations other than
17 Upper Lake Spokane or above Monroe?

18 A. To fish?

19 Q. To fish.

20 A. Correct.

21 Q. Okay. In -- and I'm not sure. In the
22 documents that you produced through your counsel --
23 through counsel yesterday included a number of Avista
24 Corporation documents. Do you recall using those fish
25 population assessment reports to FERC?

1 A. Yes.

2 Q. Okay. Is it your understanding that Avista
3 Corporation is essentially required to do this because
4 they operate hydropower dams on the Spokane River?

5 A. I have no idea about that.

6 Q. All right. Would you agree with the statement
7 that dams on a river can have an ecological effect on
8 fish populations?

9 A. I would agree that dams on a river can affect
10 fish populations, yes.

11 Q. For the purposes of your assessment, would it
12 have made -- been appropriate to divide the Spokane
13 River into reaches or stretches between dams in order to
14 more accurately assess fish tissue data?

15 A. Again, I was dependent upon the State of
16 Washington's collection methods for that assessment. So
17 I had no say in terms of site locations of where they
18 collected their fish.

19 Q. And so that -- so your opinions are dependent
20 on the specific sampling locations selected that you
21 included -- that you included in your report?

22 A. Correct.

23 Q. Okay. Am I correct that the three species of
24 fish that you looked at sampling for in your report were
25 the mountain whitefish, the large scale sucker, and the

1 A. No. The mountain whitefish is not a salmonid.

2 Q. It's not a salmonid.

3 What is the mountain whitefish?

4 A. It's a nonsalmonid fish.

5 Q. That's fair. Perfectly fair.

6 So the rainbow trout of the three is the only
7 one you consider to be a salmonid?

8 A. Correct.

9 Q. And the large scale sucker as evidenced in that
10 Ecology is a nonsalmonid?

11 A. As well, yes.

12 Q. And the large scale sucker is the specific
13 species that you refer to in your page 4 opinion as
14 being affected by a hazard at Upper Lake Spokane and
15 above Monroe, is that the species of fish that you're
16 referring to?

17 A. For fish effects, it was, looks like -- let me
18 see here. Let me check a second just to confirm.

19 Q. Sure.

20 MR. LAND: Yeah, take your time.

21 THE WITNESS: It would be mountain whitefish
22 for total PCBs on wet weight above Monroe, above
23 Nine Mile, Upper Lake Spokane. That would be exceedance
24 of fish-eating organism, which includes fish or birds.
25 Go to table 3. We have large scale sucker above Monroe

1 and Upper Lake Spokane that exceed the lipid normalized
2 thresholds. We also have upper river and upper lake --
3 above upriver and above Upper Lake Spokane that exceed
4 the fishing organisms, which could be another fish
5 actually. And 4. For rainbow trout, right.

6 This would have been above Monroe for lipid
7 normalized threshold and for weight -- wet weight
8 normalized threshold above Monroe.

9 BY MR. HANSEN:

10 Q. So on page 4 when you say "pose a hazard to at
11 least one species of fish at Upper Lake Spokane and
12 above Monroe," what species of fish are you referring
13 to?

14 A. At least one. There is more than one, but at
15 least one. It could be -- it could be mountain
16 whitefish. That's above -- that's in Upper Lake
17 Spokane. And rainbow trout or above Monroe. Mountain
18 whitefish are above Monroe, above Nine Mile and Upper
19 Lake Spokane. So at least one species, but it also
20 means that some of the others might also be affected.

21 Q. So when you wrote "PCBs pose a hazard to at
22 least one species of fish at Upper Lake Spokane and
23 above Monroe," you're not referring to one specific
24 species of fish?

25 A. In that particular case, it could -- there

1 are -- it could be either one of those three. Right.

2 Well, the ones that I mentioned just a minute ago. So
3 it could be mountain whitefish at above Nine Mile. It
4 could be mountain whitefish above Upper Lake Spokane,
5 which is one species. It could be rainbow trout at --
6 or large scale sucker above Monroe and at Upper Lake
7 Spokane. Or it could be rainbow trout at above Monroe.

8 Q. Okay.

9 A. Does that answer your question?

10 Q. I believe so.

11 The lipid normalized benchmarks that you used
12 come from Meador; correct?

13 A. Meador. Yes.

14 Q. Meador. Sorry. Said that wrong again.

15 And those benchmarks are found on table 2 of
16 Meador?

17 A. Yes. That is table 2 --

18 Q. And --

19 A. -- in the bottom right-hand corner.

20 Q. So if I'm -- the value you use in sort of as a
21 note to the table is fish health threshold 2.4 million
22 nanograms per kilogram liquid -- lipid -- sorry --
23 lipid, and that's the value that you used from Meador?

24 A. Yeah. In Meador, it's different units as well.
25 It's 2.35, which I round to 2.4, but that's 2.4

1 avian.

2 A. Right.

3 Q. 48,000 nanograms per kilogram wet weight. And
4 then C is prey threshold for fish-eating mammal, 15,000
5 nanograms per kilogram wet weight. And you're saying
6 this identifies it is an environmental Canada --
7 Environment Canada source, but you're saying now that
8 you got those from another publication?

9 MR. LAND: I think also this might be a
10 different document than the 2002 document, because this
11 is a 2001 document from what I'm seeing.

12 THE WITNESS: Yeah. So there is a 2002
13 document that supposedly has both of these -- has the
14 TEQ values and the wet weight value, because everybody
15 cites the 2002 document in the literature.

16 So what I can do is provide you with that
17 peer-reviewed study that cites that value, but the
18 Environment Canada -- we can look through the
19 Environment Canada website, but it took me a fairly
20 amount of time to get this particular document. It's
21 very difficult to find this one off of the website
22 directly.

23 BY MR. HANSEN:

24 Q. So you're saying this document before you
25 that's marked as an exhibit was used to develop -- or

1 used to derive the TEQ values?

2 A. Yes. So in table 1, if you look in table 1 on
3 the right of that document, those values, that .79 and
4 the 2.4, the TEQ-based avian and fish-consuming mammal
5 document or value for TEQs.

6 Q. And you -- sorry.

7 A. And the total PCB value is -- there is a
8 discussion about total PCBs. They just don't put it in
9 a table for that, that's present. So if you look
10 through the mammalian toxicity component, they talked
11 about what doses were given for mink, what doses were
12 given for other mammals, for example, and, you know,
13 there is another one for birds, what doses were given of
14 different Aroclors and PCBs that actually provided. But
15 the actual number's not provided in a table, so the
16 numbers that are tabular -- excuse me -- are from other
17 reports essentially.

18 So I can provide that other report that has
19 those numbers or we can try to find it off of the
20 Environment Canada website, which I am not very --

21 MR. LAND: We'll search for that document. If
22 we find it, we'll send it over.

23 MR. HANSEN: That's the document I was asking
24 you about and you -- this is the one you sent.

25 MR. LAND: Yeah, and I must have been mistaken

1 if that's the case.

2 MR. HANSEN: Okay.

3 THE WITNESS: I was -- actually, it's my fault.

4 I thought this had -- I thought this had the total PCB
5 values in it as well. It just has the TEQ values.

6 BY MR. HANSEN:

7 Q. Got it. So we'll -- we'll address the TEQ
8 values then. We'll use this document for now --

9 A. Okay.

10 Q. -- for that purpose.

11 A. My apologies for that.

12 Q. No. No problem.

13 You mentioned that table 1 is the Canadian
14 tissue residue guideline for PCBs for the protection of
15 wildlife consumers of aquatic biota. These are the
16 guideline values that you reference on tables 2
17 through 4?

18 A. Correct.

19 Q. Okay. The TEQ threshold for fish-eating
20 mammals is .79 nanograms per kilogram wet weight; is
21 that right?

22 A. Nanograms per kilogram wet weight, correct.

23 Q. And then the TEQ threshold for fish-eating
24 fish/avian is 2.4 nanograms per kilograms wet weight?

25 A. Correct.

1 Aroclor 1254 per kilogram per day experienced a
2 10 percent reduction in growth rate."

3 So is it your understanding that these
4 Environment Canada values at least for reference
5 concentrations for birds are based upon white Leghorn
6 chickens based on this document?

7 A. Based upon what I read in this document, yes,
8 because they're again the most conservative value.
9 They're the most sensitive species.

10 Q. And if you go down further about midway through
11 this paragraph, it notes "that white Leghorn chickens
12 may be inherently 10 to 1,000 times more sensitive to
13 TEQ exposure than wildlife species"; is that correct?

14 A. Than wildlife species. I don't know if I see
15 that one. Yes, there it is. That's based upon the
16 potency differences, yes.

17 Q. And then sort of the last paragraph -- or
18 excuse me -- the last sentence on this paragraph, it
19 says, "Also, consultations with avian experts from the
20 Canadian Wildlife Service corroborated the fact that the
21 Leghorn chicken is a particularly sensitive species and
22 perhaps not fully representative of all avian species."

23 A. In terms of its sensitivity, that is correct.

24 Q. Okay. And so these Environment Canada TEFs for
25 birds that you used are based on the most sensitive

1 species to PCBs?

2 A. TEQs --

3 Q. I'll reask it.

4 A. -- were based upon -- were based upon this
5 document. And it appears that they used -- I'm not -- I
6 do not know how that number was integrated into the
7 development of these particular values.

8 Q. This document specifically -- strike that.

9 This document specifically identifies the
10 reference concentration as being white Leghorn chickens;
11 correct?

12 A. It identifies -- it identifies LOAELs and
13 NOAELs and a TDI of 2.3 nanograms per kilogram per day,
14 but it doesn't indicate how 2.4 was derived. And -- oh,
15 sorry. On the last sentence of the top paragraph, so
16 they took the lowest TDI and then divided it by a food
17 borne estimate, and that's how they got the 2.4. So it
18 appears that they did use the Leghorn chick -- the
19 Leghorn chicks for that, yes.

20 Q. And then the mammalian reference concentration,
21 which is above that, is derived, according to the first
22 sentence, from a study in which male and female minks
23 were fed diets containing --

24 A. That's how I understand it, yes.

25 Q. And so these two concentrations were developed

1 using a species that are known to be particularly
2 sensitive to PCBs?

3 MR. LAND: Objection. Vague. Misleading.
4 Go ahead.

5 THE WITNESS: These are species that were
6 thought to be conservative species to protect other
7 species that may not be evaluated.

8 BY MR. HANSEN:

9 Q. Given the documented sensitivity, would you
10 agree that any criteria based on chickens or mink would
11 overestimate risk -- has the potential to overestimate
12 risk to wildlife?

13 MR. LAND: Objection. Vague. Incomplete
14 hypothetical. Misleading.

15 THE WITNESS: And I disagree completely.
16 Again, the idea is in any type of risk assessment, you
17 use the most sensitive species as a surrogate to control
18 for other animals that you don't have guidelines for.
19 So you try to use the most sensitive species in any type
20 of risk assessment.

21 (Exhibit 19 was marked for identification.)

22 BY MR. HANSEN:

23 Q. The exhibit that was placed before you has a
24 title called "Canadian Tissue Residue Guidelines for the
25 Protection of Wildlife Consumers of Aquatic Biota"; is

1 that right?

2 A. Yes.

3 Q. And it looks like it was a 1999 document. I'm
4 not sure if it's the document you're referencing or if
5 there is a later version, but your understanding is that
6 this is the tissue residue guidelines that, for lack of
7 a better term, guide Environment Canada in creating
8 these values?

9 A. So these are guidelines that help develop
10 tissue residue guidelines. So it's a guideline to
11 develop a guideline essentially.

12 Q. Okay. Turn your attention to tables 1 and 2,
13 which are on pages 11 and 12. And table 1 is a table
14 described as "Body weights and daily food ingestion
15 rates of avian species that consume aquatic biota";
16 correct?

17 A. Yes.

18 Q. So this Environment Canada guideline is
19 providing species-specific data with respect to body
20 weights and food consumption?

21 A. It would appear they're doing -- they're
22 calculating food intake to body weight ratios and
23 estimating what daily food consumption it would be on a
24 wet weight basis.

25 Q. In this particular table, table 1 has specific

1 information for bird species that you identified as
2 examples in the Spokane River; correct?

3 A. I believe there is a bald eagle and osprey on
4 there, yes.

5 Q. And then if you look at the right side of the
6 page, there is a heron as well?

7 A. There is two herons.

8 Q. Great blue heron?

9 A. Uh-huh. And a green-backed heron.

10 Q. And then if you look at page 12, table 2, it's
11 described as body weights and daily food ingestion rates
12 of mammalian species that consume aquatic biota;
13 correct?

14 A. Yes.

15 Q. And it contains two of the species that you
16 identify as examples in your report, the mink and the
17 otter; correct?

18 A. Yes.

19 Q. And it lists their specific body weight
20 averages and daily food ingestion rates?

21 A. Correct.

22 Q. This table doesn't include the black bear;
23 correct?

24 A. I do not see black bear on there.

25 Q. And if you look to the right-hand side of the

1 page underneath table 3, there is a narrative that
2 says -- I guess it continues. It starts on page 10. It
3 says, "Based on our existing data," then it continues on
4 page 12, "(tables 1 and 2), there are avian and
5 mammalian species with ratios as high as .94 and .24,
6 respectively (although in some cases these are based on
7 allometric equations and not field-derived data). Use
8 of these ratios in developing RCs will result in
9 conservative TRGs protective of all wildlife species."
10 Did I read that correctly?

11 A. Yes, you did.

12 Q. And that's what -- that's what you did, you
13 used a value that was conservative and protective of all
14 species, a surrogate figure?

15 A. I did not use food intake to body weight ratio
16 in values. I used a value that incorporates some of
17 that information, but the value that I did did not
18 incorporate a body weight to food ingestion ratio.

19 Q. And the paragraph continues, "On a
20 site-specific basis, RCs can be calculated for key
21 indicator species provided that accurate information is
22 available regarding FI, BW, and other species-specific
23 and site-specific data (e.g., dietary preferences). The
24 result can be compared to the generic TRG developed to
25 protect all wildlife"; correct?

1 A. That's what the -- that's what the document
2 says.

3 Q. So this guidance document recommends the
4 calculation based on site-specific and species-specific
5 data?

6 A. When the data is available, it says on a
7 site-specific basis, RCs can be calculated provided that
8 accurate information is available. So if you have
9 accurate information, you would probably use this. I
10 would argue, though, if you already have a threshold
11 value, which is what these are used for to develop, then
12 you use the threshold value that's already present.

13 Q. Did you not have sufficient data in order to
14 incorporate species-specific assessment?

15 MR. LAND: Objection. Mischaracterization of
16 prior testimony and misleading.

17 THE WITNESS: I used a peer-reviewed value that
18 was present in government documents and in the
19 peer-reviewed literature to do my assessments.

20 BY MR. HANSEN:

21 Q. My question was: Did you not have the data in
22 order to do a site- or species-specific assessment?

23 MR. LAND: Objection. Misleading.

24 THE WITNESS: I did not use -- we did not -- so
25 you're asking did I have data to do a site-specific

1 evaluation? I did not do a site-specific evaluation
2 because I used a value that was already provided by
3 Environment Canada and the peer-reviewed literature to
4 do that assessment -- to do a risk-based assessment.

5 BY MR. HANSEN:

6 Q. Is Environment Canada recommending here that
7 you do a site-specific analysis?

8 A. Environment Canada is indicating this is how
9 they use these -- this guidance to come up with guidance
10 values that you can use in site-specific assessments.

11 Q. Well, can I ask you to turn to page 17 of your
12 report. This is table 8, and then there are additional
13 tables on page 18 and 19. Those are tables 9 and 10.

14 A. Yes.

15 Q. And this -- these tables identified predicted
16 values of total PCBs based on future remediation
17 scenarios; is that correct?

18 A. Yes.

19 Q. And so the tables themselves identify six
20 different remediation scenarios?

21 A. Yes.

22 Q. I don't see any reference to these six
23 scenarios elsewhere in your report. Where does -- where
24 do these six scenarios come from?

25 A. These scenarios come from -- I believe it's

1 the -- it's either the Gobas report or the other
2 fellow's name that I can't remember his name. Yeah. I
3 can't recall the other report. It's basically from
4 either Gobas or the other report.

5 Q. And I asked you earlier if you had relied on
6 anything from Gobas and you said you hadn't because you
7 hadn't seen his report.

8 A. I hadn't seen what his conclusions of the
9 report were. These are numbers that were actually
10 generated by Azimuth, so it wasn't directly from him.

11 Q. And so how were these values -- how were these
12 scenarios presented to you in your capacity?

13 A. They were presented by Azimuth from Gobas. So
14 I guess indirectly I was dependent upon Gobas
15 information. It just wasn't directly from his -- any
16 communication with him.

17 Q. Okay. And do you have any idea of the
18 methodology used to create these remediation scenarios?

19 A. I know it was a model that he had developed and
20 based on loadings that were present. That was the Gobas
21 component. And then the other -- the second report that
22 I can't recall the name of was based on water treatment
23 models, if I recall.

24 Q. Was it Dilkes?

25 MR. LAND: I think he's talking about Trapp.

1 THE WITNESS: That's the one.

2 BY MR. HANSEN:

3 Q. The Trapp, Bowdan report?

4 A. Yes.

5 Q. Okay. And so you don't have any -- you don't
6 have any idea of the model that was used either by
7 Trapp, Bowdan, or Gobas to create these remediation
8 scenarios?

9 A. Correct.

10 Q. And you don't have any idea what data inputs
11 went into develop those particular models -- or excuse
12 me -- develop those particular scenarios?

13 A. As I mentioned, I believe there was a loading
14 component that was associated with that and a trophic
15 model that Gobas uses to do that, but I don't know what
16 the parameters are for that model.

17 Q. And so as I understand it from table 8 where
18 you presented a set of sediment values to assume -- or I
19 guess a better question would be to ask generally: How
20 was the information presented to you and what did you do
21 with it to create table 8?

22 A. So the values that are present in table 8 were
23 provided to me in a table with these headlines -- with
24 these headers for scenario 1, scenario 2, scenario 3,
25 the 2013 to 2018 arithmetic mean concentration, as well

1 You don't have -- one way or the other, you don't know
2 whether or not these fish tissue calculations in
3 tables 9 and 10 are representative of the fish on the
4 Spokane River as a whole?

5 A. I do not know -- I guess I'm not sure how to
6 answer that. Can you ask that again? I'm not sure
7 what --

8 Q. Sure.

9 A. Are they representative of fish on the Spokane
10 River? I cannot make that assessment. I know that they
11 are calculated from a model that those fish should have
12 that level if this treatment takes place. That's all I
13 know.

14 MR. HANSEN: We'll go off the record.

15 THE VIDEOGRAPHER: Going off the record. The
16 time is 3:02 p.m.

17 (Recess, 3:02 p.m. to 3:14 p.m.)

18 THE VIDEOGRAPHER: We are back on the record.
19 The time is 3:14 p.m.

20 BY MR. HANSEN:

21 Q. Dr. Schlenk, I just had a couple more questions
22 for you.

23 If I could ask you to turn to the bottom of
24 page 15 of your report.

25 A. Okay.

1 Q. And the last paragraph says, "These data
2 indicate hazard and elevated risks to aquatic organisms
3 and mammalian, avian, and other fish that consume fish
4 within the Spokane River where samples were collected."
5 Am I correct that this specific opinion is, I guess,
6 specified to the area on the Spokane River where samples
7 were collected?

8 A. That's the -- where the samples were collected
9 is where I did the risk assessment, yes.

10 Q. So that's a yes?

11 A. Well, if you want to say, does it indicate
12 risks at other parts of the river. It's potential that
13 you could have risks at other parts of the river, but in
14 terms of where those samples are collected, that's where
15 the risk was. Obviously fish move and they can move to
16 other locations where you might have risk as well.

17 Q. So you anticipated my follow-up question, which
18 was, was you don't know one way or the other whether
19 these -- whether your assessment applies to locations on
20 the Spokane River where sampling was not done?

21 A. Correct.

22 Q. And during our break, you weren't able to
23 locate that reference, that Environment Canada --

24 A. No.

25 Q. -- 2002?

1 MR. LAND: He's going to search for it after
2 today and I will get back to you with whatever he finds.

3 BY MR. HANSEN:

4 Q. All right. And I think we've already covered
5 what specific references you used -- you pulled from
6 that document.

7 A. Yes.

8 MR. HANSEN: And I didn't have any other
9 questions on that document or with respect to your
10 report. So thank you for your time.

11 MR. LAND: Nothing for me.

12 THE VIDEOGRAPHER: This concludes today's
13 videotaped deposition. The time is 3:16 p.m. We are
14 now off the record.

15 (Deposition adjourned at 3:16 p.m.)

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1 I declare under the penalty of perjury under
2 the laws of the State of California, United States of
3 America, that the foregoing is true and correct; that I
4 have read my deposition and have made the necessary
5 corrections, additions or changes to my answers that I
6 deem necessary.

7 Dated: 12/9/2019

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A handwritten signature in black ink, appearing to read 'Daniel Schlenk', is written over a horizontal line.

Daniel Schlenk, PhD

REPORTER'S CERTIFICATE

I, Cynthia J. Vega, a Certified Shorthand Reporter for the State of California, do hereby certify:

That the witness in the foregoing deposition was by me duly sworn; that the deposition was then taken before me at the time and place herein set forth; that the testimony and proceedings were reported by me stenographically and were transcribed through computerized transcription under my direction; and the foregoing is a true and correct record of the testimony and proceedings taken at that time.

I further certify that I am not of counsel or attorney for either or any of the parties in the foregoing proceeding and caption named or in any way interested in the outcome of the cause in said caption.

IN WITNESS WHEREOF, I have subscribed my name this 18th day of November, 2019.

Reading and Signing was not requested.



Cynthia J. Vega, CSR No. 6640

Case Name: City of Spokane v. Monsanto Company, et al.

Deposition Date: November 13, 2019

Deponent: Daniel Schlenk, PhD

Corrections from Schlenk Deposition:

Pg.	No.	Now Reads	Should Read	Reason
Page 69	22	temper	temporal	Wrong word
Page 72	18	Spoor	Spokane	Wrong name
Page 88	10	---	ecosystem	Missing word
Page 132	14	adverse outcome path	adverse outcome pathway	Wrong word